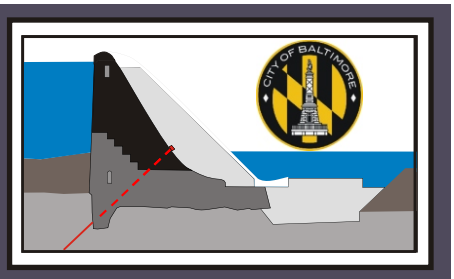
The City of Baltimore
Loch Raven Dam Rehabilitation
Project Update: March, 2003



Project Focus: Rock Anchor Installation

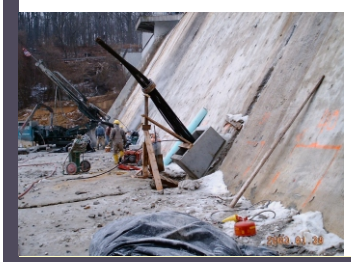
Drills core openings from 7 to 14 inches in diameter, up to 159 feet deep, into the underlying bedrock.

Corrugated pipe sheathing is inserted to aid cable anchor installation.

A crane is used to insert the steel cable anchors into the lined opening.

Pressurized grout is forced into the opening to seal the cable anchors in place.

A stressing jack stretches each cable of the anchor during a 30-hour process. It is this "stress" that gives the anchor its strength.



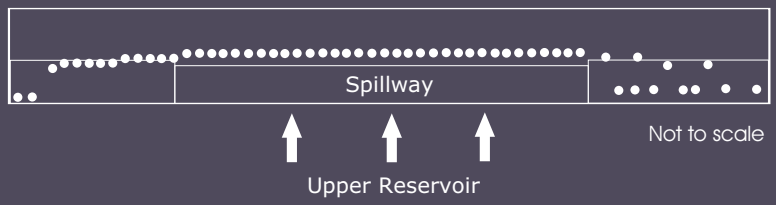
After stressing, the jack is removed. The cables will be trimmed and capped, and ultimately buried by the RCC, to be placed later.

A critical component to the rehabilitation of Loch Raven Dam is the installation of rock anchors. In the simplified diagram above, the red line indicates the location of the rock anchors.

57 rock anchors will stabilize the dam throughout construction, and will be left in place as further support against future storm events. The anchors will be supplemented with concrete placement at the toe of the dam.

The anchors are comprised of several steel cables which are grouted in place, then "stressed" or pulled taught with a jack. The process of installing the rock anchors into Loch Raven Dam is shown on the left, and will be completed this summer.

The diagram below shows a "bird's eye" view of the dam from directly above. Dots represent the location of each of the 57 anchors



Completed Work

- Shotcrete facing has been removed
- Bulkhead in place on east side of dam

Ongoing Work

- Rock anchor installation
- Improvements to Hoover Lane for emergency hauling

Upcoming Work

- Excavation to expose the dam's foundation

Road and Watershed Use

The City has posted various informational signs for detour and watershed use provisions along the routes to and from the project site. Traffic and recreational activity management will be in place as-is throughout this project.

http://www.baltimorecity.gov/government/dpw/lrdam.html